

ALMA Cycle 3 Relative Integration times

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Using previously established methods I calculated time ratios for the Cycle 3 antenna configurations. Files used were those in the CASA release retrieved Sept 16 2015 in CV:

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/home/casa/data/distro/alma/simmos/alma.cycle3.1.cfg
/home/casa/data/distro/alma/simmos/alma.cycle3.2.cfg
/home/casa/data/distro/alma/simmos/alma.cycle3.3.cfg
/home/casa/data/distro/alma/simmos/alma.cycle3.4.cfg
/home/casa/data/distro/alma/simmos/alma.cycle3.5.cfg
/home/casa/data/distro/alma/simmos/alma.cycle3.6.cfg
/home/casa/data/distro/alma/simmos/alma.cycle3.7.cfg
/home/casa/data/distro/alma/simmos/alma.cycle3.8.cfg
/home/casa/data/distro/alma/simmos/aca.cycle3.cfg

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Results are in Table 1. The average 12mC/X time ratio is 0.26. The “Median point” and “median $N_{overlap}$ ” are discussed and defined in the writeup of Cycle 4 configurations; the “total $N_{overlap}$ ” is the number of visibilities for the given array that fall between the shortest baseline of the more extended configuration and the longest baseline of the more extended configuration, including the extreme points.

Configs	t_C/t_X	Median point [m.]	Median $N_{overlap}$ (frac.compact, frac.ext.)	Total $N_{overlap}$ compact	Total $N_{overlap}$ ext.
Cy3-1/Cy3-4	0.17	128.3	109(08.6%, 08.6%)	1059(83.9%)	182(14.4%)
Cy3-2/Cy3-5	0.35	223.5	143(11.3%, 11.3%)	1161(92.0%)	408(32.3%)
Cy3-3/Cy3-6	0.22	356.9	87(06.8%, 06.8%)	1125(89.2%)	248(19.6%)
Cy3-4/Cy3-7	0.27	625.5	95(07.5%, 07.5%)	827(65.5%)	226(17.9%)
Cy3-5/Cy3-8	0.27	898.9	103(08.1%, 08.1%)	885(70.1%)	244(19.3%)
AcaCy3/C3-1	7.3	19.1	37(40.6%, 02.9%)	55(60.4%)	136(10.7%)
AcaCy3/C3-2	2.3	23.8	19(20.8%, 01.5%)	53(58.2%)	42(03.3%)
AcaCy3/C3-3	1.0	28.4	13(14.2%, 01.0%)	53(58.2%)	18(01.4%)

Table 1: Comparison of Cycle3 array configuration overlaps. Note that as in previous work numbers count distinct visibilities in a snapshot — including $(-u, -v)$ — not physically distinct baselines *per se*.